adjustment assembly. The applicants submit that this was not the case and that the present claims do not violate the recapture rule.

First, none of claims 52, 53 and 54 in the issued patent recite (1) a T-shaped structure, T-shaped coupling structure or T-shaped slot, or (2) an adjustable lock. For example, claim 52 recites:

> "said leg having a longitudinal slot...said slot having an internal shoulder and being adapted to receive a complementary tongue of a boss to prevent relative movement therebetween in directions other than longitudinal."

Similarly, claim 53 recites:

> "said leg having a longitudinal slot...said slot having an internal shoulder and being adapted to receive a complementary tongue of a boss to prevent relative movement therebetween in directions other than longitudinal."

And finally, claim 54 recites:

> "said leg having a longitudinal slot...said slot having an internal shoulder and being adapted to prevent relative movement therebetween in directions other than longitudinal."

Since these claims do not recite either a T-shaped coupling structure (or the like) or an adjustable lock, the applicants did not rely upon these two features for allowance in the originally issued patent. Therefore, the applicants did not purposefully limit the claims to include these features in order to gain allowance of the issued patent. There was no "surrender" of the coverage that omitted the "T-shaped" coupling structure. The claims without a T-shaped coupling structure were simply allowed with claims that recited a T-shaped coupling structure.

Further, at no time did the applicants distinguish the claims from the prior art based upon the recitations f the T-shaped coupling structure or the like. The applicants simply noted that the claims recited such a structure. In the Amendment A filed November 27, 1996, noted by the examiner, the applicants made the following arguments in regard to the prior art:

- "The faces resisting the shroud [in the '214 patent] are not moveable, and thus, do not adjust to eliminate looseness in the connection." Claim 1.
- "However, neither of these patents discloses a lock receiving opening which opens in a wall of the wear member." Claims 2, 26, and 34.
- "However, Jones '214 does not even include a bearing face in the T-shaped slot to engage the boss, much less a bearing face which is substantially perpendicular to the longitudinal axis of the working end." Claims 20 and 52.
- "However, as mentioned above, the wear member of Jones '214 does not even have a bearing face to abut the boss, much less a bearing face which extends outward beyond the slot a distance at least approximately as far as the working end." Claims 22 and 53.

As is evident, none of these arguments seek to distinguish the invention from the prior art on the basis that the invention includes a T-shaped coupling structure. The applicants even acknowledged that the prior art already included this feature. In discussing the Jones '214 assembly, the applicants noted: "At least one of the legs is formed with a T-shaped slot that is slid rearwardly over a boss having a complementary shape." Hence, this was simply a feature included in many of the claims, not a feature that was relied upon to distinguish the invention from the prior art.

The adjustable lock for use in the disclosed wear assembly was included in some of claims and argued to distinguish the invention from the prior art. For instance, claims 1 and 51 pertained to a wear assembly that included a boss, a wear member and a lock, wherein the lock included an adjustment assembly. This feature was used to distinguish these claims from the cited prior art, but was not relied upon in all of the claims included in the issued patent. Independent claims 6, 10, 20, 26, 34, 40, 41, 47, 52, 53, and 54 all issued in the original patent without reciting that the lock included an adjustment assembly. There is more than one feature of the invention that is patentable over the prior art. Simply because one feature was argued to distinguish some of the claims over the prior art does not then mean that the applicants "surrendered" the coverage that omitted this feature in order to obtain the issuance of the original patent. This is clearly not true in view of the many claims that issued without this feature.

In *Hester Industries v. Stein, Inc.*, 142 F.3d 1472, 46 USPQ2d 1161 (Fed. Cir. 1998), cited by the examiner, surrender was found because the applicant in the reissue had repeatedly (27 times) in over six years of prosecution argued that the limitations "solely with steam" and "two sources of steam" were not found in the prior art. Moreover, the applicant had argued that these limitations were "critical" to the invention. The patent issued with these limitations contained in the only independent claim. In the reissue, these two limitations were omitted and replaced only with limitations that were known in the prior art. In the present circumstance, there was no such surrender. Only some of the independent claims in the issued patent contained the noted limitations, and in the case of the T-shaped structure, there was no argument that this feature distinguished the invention from the prior art.

Similarly, in *In re Clement*, 131 F3d. 1464, 45 USPQ2d 1161 (Fed. Cir. 1997), also cited by the examiner, the applicant in the reissue was seeking to eliminate the very limitations it had added to obtain allowance of the claims, had argued that these limitations distinguished the invention from the prior art, and had admitted that the amendments had been made for this purpose. As discussed above, this is not the circumstance of the present case. In this case, the omission of the "T-shaped coupling structure" (or the like) and the "adjustment assembly" from the reissue claims does not violate the recapture rule.

Finally, in *Ball Corp. v. United States*, 729 F.2d 1429, 221 USPQ 289 (Fed. Cir. 1984), also cited by the examiner, the court permitted reissue even though the applicant in the reissue had omitted the limitations that were added during the pendency of the originally issued patent. In its decision, the court stated: "The proper focus is on the *scope* of the claims, not on the individual *feature* or *element* purportedly given up during prosecution of the original application." This case does not that support a finding that claims 74-118 violate the recapture rule.

Withdrawal of the rejection under 35 USC 251 as a violation of the recapture rule is respectfully requested.

Claims 74-80, 84-87, and 108-112 have also been rejected under 35 USC 102(b) on the basis of U.S. Patent No. 5,088,214 to Jones. The applicants believe that the claims as currently presented are not disclosed by this '214 patent.

More specifically, claims 74 and 111 recite a boss provided with an inner surface that includes a front portion and a rear portion. The inner surface is bent such that the front portion extends generally transverse to the rear portion so that the rear portion is

along the face of the lip and the front portion is along the digging edge. The examiner has construed all of the surfaces of the boss in the '214 patent that face the lip as the recited inner surface. While these faces are "bent" relative to each other, the '214 patent lacks (i) front and rear portions that are bent relative to each other, (ii) a front portion of the inner surface that is generally transverse to the rear portion, and (iii) a rear portion that is along a face of the lip and a front portion that is along the digging edge. The boss in the '214 patent has a generally flat "unbent" surface that extends along the lip. Hence, this patent does not anticipate claims 74 and 111.

Claims 75 (dependent on claim 74) and claim 108 recite that the bearing surface of the wear member and the front support surface of the boss abut and are each generally transverse to the extension of the first shoulder of the boss away from the digging edge. The '214 patent does not include a front support surface that abuts a bearing surface of the shroud. As best seen in Figures 2 and 5, the inside portion of the shroud at the front of the slot is formed with an upper arcuate surface that extends forward of the front face of the boss such that there is no bearing face in abutment with the front face of the boss. The examiner contends that contact occurs between this surface and the upper front corner of the boss. Even if true, the wear member in the '214 patent does not include a transverse bearing surface to abut the front face of the boss. Hence, claim 75 is not anticipated by the '214 patent for this additional reason.

Claim 86 depends on claim 74 and additionally recites that the wear member includes an opening with a main portion and a narrower stem portion for receiving the lock, wherein the main and stem portions each extend completely through the wear member. In the '214 patent, the opening for the lock includes recesses 60 to receive tabs

59. These recesses are shallow and do not extend completely through the shroud. Accordingly, this claim is not anticipated by the '214 patent for this additional reason.

Claims 88-90, 115, 117 and 118 have been rejected under 35 USC 103 on the basis of the '214 patent in view of U.S. Patent No. 4,433,496. The applicants traverse this rejection.

Claims 88-90 depend from claim 74 and are considered allowable for the reasons given above. Moreover, each of claims 88-90, 115, 117 and 118 recite a wear assembly including a boss, a wear member and a lock, wherein the lock has an adjustment assembly selectively movable to tighten the mounting of the wear member on the boss.

The '214 patent discloses a wear assembly wherein a shroud includes a slot that is received over a complementary shaped boss fixed to the lip. The shroud includes an opening beyond the boss for receiving a lock. The lock then prevents the shroud from sliding forward off of the boss. This lock clearly includes no adjustment assembly, and needs no adjustment assembly to meet the objective of securely holding the shroud to the lip while permitting easy removal and replacement with a new shroud.

The '496 patent discloses an assembly which is much different in structure, operation and purpose as compared to the '214 patent. There is nothing in the '496 patent that would suggest to one ordinarily skilled in the art to add an adjustment assembly to the lock of the '214 patent.

The intent behind the assembly in the '496 patent is not to add an adjustment assembly, but rather to provide means by which the lock may be set. For many years, adapters could be attached to a lip of a bucket by welding or by being mechanically attached through a "whisler" attachment. In a whisler attachment, the adapter is provided

with a pair f bifurcated legs that straddle the lip. Each f the legs is provided with an elongate sl t that generally aligns with an elongate slot formed in the lip. The rear portion of each leg is provided with an inclined surface that slopes downward toward the slot in the leg. A generally C-shaped spool is then placed through the slots in the legs and in the lip such that its arms engage the inclined surfaces of the adapter's legs. The inside surfaces of the arms are also inclined to generally match the slope of the inclined surfaces on the legs. Traditionally, a wedge is then hammered into the slot in the lip between the front wall of the slot and the front wall of the spool. The hammering of the wedge, then, drives the spool rearward so that the arms ride over the inclined surfaces of the adapter. The matching slopes of the arms and the inclined surfaces of the adapter legs cause the arms to pinch the legs of the adapter against the lip. This pinching of the legs is the means by which the adapter is held to the lip. Without the tight pinching, the adapter simply falls off the lip.

The '496 patent discloses a whisler style attachment and is an effort to eliminate the need to hammer the wedge into the opening, and thereby provide a safer and easier process by which the adapter can be attached and detached. More specifically, a bolt is provided to push the wedge into the opening. The wedge is anchored to the bottom of the spool via a nut. The spool is anchored by gripping the underside of the adapter. By having the spool grip the adapter on both sides, the screw can be rotated to force the wedge into position so that the spool is driven rearward to pinch the adapter legs against the lip. This forcing of the wedge is to attach the adapter in place, not simply an adjustment to eliminate looseness of an already secured lock.

In the '214 patent, the lock is fit into the opening in the wear member to h ld the wear member in place on the boss, and hence, the lip. Th lock performs this function even if looseness exists between the wear member and the lip. There was never any hammering involved in the '214 patent, hence, the improvement sought by the '496 patent would be inapplicable to the assembly in the '214 patent.

Further, the '496 patent uses a bolt and wedge to effect the attachment of the adapter to the lip. In the '214 patent, a lock without the use of a bolt and wedge secures the shroud to the lip. A fixed boss is used instead of a bolt and wedge arrangement. The lock of the '214 patent uses less parts and involves an easier assembly of the shroud to the lip as compared to the whisler style attachment in the '496 patent. There is no suggestion in the '496 patent that the addition of a bolt and wedge to the '214 patent assembly would be beneficial in securing a shroud to a lip. Without the benefit of the teachings of the present invention, there is no reason to think that one of ordinary skill in the art would consider it obvious to add extra parts and extra assembly steps for performing the same functions as already being performed by the simple fixed lock in the '214 patent.

Moreover, the lock arrangement of the '496 patent requires the presence of a sizable opening in the lip. Without the ability of the spool to pass through the lip and grip the underside of the adapter, there is no ability to anchor the bolt and thereby drive the wedge into place. As can be appreciated, the presence of a series of openings across the front of the lip results in an undesirable weakening of the lip. It has been accepted in a whisler attachment because it provides an effective way of mechanically attaching the adapter to the lip. A mechanical attachment, even one that weakens the lip, enables the

adapters to be replaced in the field when worn, as opposed to welded adapters where the bucket must often be taken off-line for replacement of the adapter. The inability to use a bucket, particularly with large a bucket, can be a great economic hardship for mining companies.

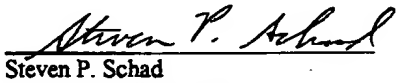
In view of the differences in structure, function and purpose of the '496 patent as compared to the '214 patent, the applicants submit that claims 88-90, 115, 117 and 118 would not have been obvious to one of ordinary skill in the art.

Moreover, claim 115 has been amended to additionally recite that the lock is substantially contained to one side of the lip. Clearly, the teaching in the '496 patent is to use an opening in the lip in order to anchor the bolt so as to push the wedge into the desired position. Claim 115 now further specifically distinguishes the invention from this construction.

For the above-discussed reasons, it is believed that claims 74-118 are allowable along with claims 1-73. A notice to this effect is earnestly solicited.

Respectfully submitted,

December 10, 2002

By: 

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APPENDIX

The amended claims 74, 75, 81, 86, 108, 109, 111 and 115 are set forth below to show the additions and deletions from this Amendment. The additions have been underlined and the deletions set in brackets.

74. (Twice Amended) A wear assembly for an excavator having a lip with a digging edge, the wear assembly comprising:

a boss adapted to be fixed to an excavator lip, the boss including a front structure with an inner surface to be fixed to the lip, the inner surface having a front portion and a rear portion, and being [that is] bent so that the front portion extends generally transverse to the rear portion with the rear portion being [and fixed] along a face of the lip and the front portion being along [the front of] the digging edge, a rear structure having a first shoulder that extends generally away from the digging edge, and a bearing surface;

a wear member including a second shoulder that engages the first shoulder to hold the wear member to the boss and prevent release of the wear member in a direction perpendicular to the extension of the front shoulder away from the digging edge, and an opening; and

a lock received into the opening in the wear member and in contact with the bearing surface of the boss to prevent disconnection of the first and second shoulders and thereby retain the wear member to the boss.

75. (Twice Amended) A wear assembly in accordance with claim 74 in which the bearing surface of the [mount] boss generally faces rearward to engage the lock, [and] the boss further includes a front support surface, and the wear member includes a bearing surface to abut the front support surface of the boss [that abuts the

wear member] to restrict rearward movement of the wear member, wherein the bearing surface and the front support surface are each generally transverse to the extension of the first shoulder away from the digging edge.

81. (Twice Amended) A wear assembly [in accordance with claim 74 in which] for an excavator having a lip with a digging edge, the wear assembly comprising:

a boss adapted to be fixed to an excavator lip, the boss including a front structure with an inner surface that is bent and fixed along a face of the lip and the digging edge, a rear structure having a first shoulder that extends generally away from the digging edge, and a bearing surface, wherein the rear structure [of the wear member] includes a rearwardly extending leg that substantially overlies the [boss] lip, and the front structure wraps around the digging edge to define a second leg;

a wear member including a second shoulder that engages the first shoulder to hold the wear member to the boss and prevent release of the wear member in a direction perpendicular to the extension of the front shoulder, an opening; and

a lock received into the opening in the wear member and in contact with the bearing surface of the boss to prevent disconnection of the first and second shoulders and thereby retain the wear member to the boss.

86. (Amended) A wear assembly in accordance with claim 74 in which the opening in the wear member includes a main portion and a stem portion, wherein the stem portion is narrower than the main portion, and each of the main and stem portions extend completely through the wear member.

108. (Amended) A wear member for mounting to an excavator having a lip with a digging edge and at least one mounting structure fixed to the lip, the wear member comprising:

an inner surface to face the lip;

a longitudinal slot for axially receiving the mounting structure therein, the longitudinal slot having a central portion that opens in the inner surface and being partially defined by holding surfaces extending laterally outward from the central portion, wherein the holding surfaces are generally facing away from the lip [with internal shoulders] for engaging the mounting structure to generally permit only relative longitudinal movement between the wear member and the mounting structure[,];

an opening passing through the wear member for receiving a lock;

a first bearing surface associated with the opening for engaging the lock to prevent removal of the wear member from the [boss] mounting structure[,]; and

[the opening including a main portion and a stem portion, wherein the stem portion is narrower than the main portion and opens in a rear portion of the wear member]

a second bearing surface forward of the first bearing surface for engaging the mounting structure;

the first and second bearing surfaces each being generally transverse to the longitudinal slot and facing in opposite directions.

109. (Amended) A wear member in accordance with claim 108 which further includes a rearwardly extending leg[,] and a front working portion, [and a rearwardly facing] wherein the second bearing surface is generally between the front working portion and the leg [for abutting the boss].

111. (Amended) A one-piece boss [for fixing] to be fixed to an excavator lip having a digging edge for m unting a wear member [thereto] to the lip, the boss including [a body defining] a coupling structure with shoulders extending rearwardly from the digging edge to engage [with] a complementary structure of a wear member, [a front portion with] an inner surface to be fixed to the lip and having a front portion and a rear portion, the inner surface being [that is] bent so that the front portion extends generally transverse to the rear portion with the rear portion being [and adapted to be fixed] along a face of the lip and the front portion being along [the front of] the digging edge, a forwardly facing first bearing surface to abut the wear member and resist rearwardly directed forces, and a rearwardly facing second bearing surface for contacting a lock securing the wear member to the boss, each of the first and second bearing surfaces being generally transverse to the extension of the shoulders extending from the digging edge.

115. (Twice Amended) A wear assembly for an excavator having a lip with a digging edge, the wear assembly comprising:

a boss [adapted] to be fixed to an excavator lip, the boss including a first shoulder spaced from the lip and a first bearing surface;

a wear member including a second shoulder that engages the first shoulder between the first shoulder and the lip to hold the wear member to the boss and prevent release of the wear member from the boss in a direction generally perpendicular to the lip, [and] an opening, [equipped with] and a second bearing surface associated with the opening, wherein the first and second bearing surfaces face in opposite directions when the first and second shoulders are engaged; and

a lock received into the opening in the wear member, the lock being substantially contained to one side of the lip and between the first and second bearing surfaces to prevent disconnection of the first and second shoulders from each other and thereby retain the wear member on the boss, the lock having a first lock surface to oppose the first bearing surface, a second lock surface to oppose the second bearing surface, and an adjustment assembly selectively movable to vary the relative positions of the first and second bearing surfaces to thereby apply forces to the wear member and the boss that tend to tighten the mounting of the wear member on the boss.